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ABSTRACT

This study attempted to determine the comparative effects of alternative instructional methods on the achievement of selected community college students. The study divided 175 students enrolled in a developmental writing course into experimental and control groups. Experimental students were separated into two sub-groups: those involved in independent study and those in small group instruction. Controls received traditional instruction in day and night sessions. Students with low pre-test scores on the McGraw-Hill Basic Skills System and who indicated strong family or associate influences received small group instruction. Independent study participants used programmed textbooks, audio tapes, and supporting materials emphasizing behavioral objectives. Results indicated that regardless of mental ability and reading comprehension abilities, independent study group students achieved less overall than small group or traditional instruction students; traditional instruction proved most effective in night classes; and females and younger (18-23) students showed greater achievement. However, the combined results of both experimental groups compared to control findings established no significant differences. (TR)

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THE EFFECTS OF VARIED INSTRUCTION IN DEVELOPMENTAL WRITING ON THE ACHIEVEMENT OF SELECTED GROUPS OF COMMUNITY COLLEGE STUDENTS

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INTRODUCTION

Arguments about the quality of instruction and education have persisted for years. Most of these, however, have been unproductive and, in some cases, counterproductive. Common agreement has arisen in recent years among postsecondary educators by citing that curriculum which is limited and shallow is inadequate. In addition, courses and programs offered should be dependent on the needs and interests of the people and institutions, not on tradition and so-called "normal," college-level programs (Gleazer, 1973).

The dream for a better life in America has long been associated with the opportunities afforded those who have been able to attend institutions of higher learning. According to Losak (1973), the challenge of the dream resides with the student who arrives to the campus academically underprepared and who enrolls despite long years of academic frustration and even failure.

Much of the literature has described the effects of aligning learning styles of students with instructional styles of teachers. Most of the findings, however, suggest that there is little difference in student achievement when

different methods of instruction are used, but there is substantial evidence that attrition rates are reduced among those who experience a variety of instructional methods.

In order to collect information on methods and techniques of instruction most frequently used in teaching community college students, Kelley and Wilbur (1970) rated the responses from a group of 118 community college "specialists." These respondents were representative of the major curricular areas within the community college. The methods employed most often in their curricular areas included discussion techniques, written exams, textbooks, lectures, and individual student conferences. Those methods receiving only average ratings were audio-visual aids, observation, objective examinations, and team teaching. Rated lowest by the group were programmed learning, field trips, and teaching by television as preferred teaching methods.

Murdock's study (1973) of 241 subjects in a Maryland community college compared the effects of independent study, lecture, and discussion techniques on achievement of students in freshman composition. Findings were determined through the use of standardized instruments, essay tests, and a student satisfaction questionnaire were that students assigned to the independent study group performed equally as well as those involved in lecture and discussion.

The present study, derived from previous endeavors in community college curriculum and instruction, was to

determine the comparative effects of various instructional methods on the achievement in developmental writing of selected groups of community college students. It was further designed to compare the effects of independent study and small group instruction (treatment) with traditional instruction (control) on the achievement of college students enrolled in developmental writing. Also, the study compared the groups considering intelligence as a function.

The present study included two treatment groups and two control groups. Conditions, such as length of class time, classroom space, and behavioral objectives, were the same for all groups. Qualifications of the instructional staff (a total of six) for all groups were comparable in terms of degrees held and length of prior work experience directly related to instruction in developmental writing.

METHOD

An experimental study was conducted which included an original sample of 208 community college students who were enrolled in their first year of course work, either full-time or part-time. Because several students dropped, however, only 174 were actual participants in the study. In the five designated class sections of developmental writing, four were taught during the day, and one was taught at night. The subjects were not selected at random because only one institution was included in the study, and the entire sample was in developmental studies at the urban community

college.

The experimental group (two sections) was divided into two sub-groups, thirty-five students involved in independent study and thirty-six involved in small group instruction. The control group with sixty students was the section taught at night, and the other control group with forty-four members was taught during the day. An equivalent amount of time devoted to actual instruction was maintained in each group. There were two experimental group teachers and three for each of the control groups.

PROCEDURE

Students who had completed registration and were enrolled in developmental writing during the fall term were administered a series of instruments. The program director was responsible for administering the McGraw-Hill Basic Skills System: Writing Test; the Diagnostic Paragraph Test; and an adapted version of the Cognitive Style Mapping Booklet during regular class time to all groups.

The results from the adapted version of the Cognitive Style Mapping Booklet were used in determining the modes of instruction (independent study or small group instruction) appropriate for students in the treatment groups. For example, if a student perceived himself or herself as having a visual-linguistic orientation, or T(VL), and "family" or "associate" influences, he or she was placed in a small group for instruction. On the other hand, if a student displayed, according

to the map results, an auditory-linguistic orientation, or T(AL), and an "individuality" influence, he was assigned to an independent study group. Small group instruction was provided for those students receiving low pretest scores on the writing test and for those indicating that they were influenced by associates or family. Independent study students utilized programmed textbooks, audio tapes, and supporting materials, including behavioral objectives. Students in small group instruction were afforded tutoring during class time and were supervised closely by a team of teachers. The control groups, both the day class and night class, received traditional instruction (lecture and class discussion).

Scores on the McGraw-Hill Basic Skills System: Writing Test and on the Diagnostic Paragraph Test were used to demonstrate either gains or losses in achievement in developmental writing at the end of the semester. Also, the Otis Quick-Scoring Mental Ability Test, Form FM was administered to all groups by the researcher during the last week of the term.

To determine whether statistical significance existed, the analysis of covariance technique was employed. If the F-test was significant, the t-test was used to determine the precise location of the significance. The .05 level of significance was used as the point at which to reject the null hypotheses.

ANALYSIS AND RESULTS

The major hypothesis of the study was that there was

no significant difference in achievement in developmental writing skills between groups of community college students who received alternative (varied) modes of instruction and those who did not. The scores of those enrolled in the treatment group were compared with those in the control group on both the writing test and the diagnostic paragraph test. While the resulting F ratio failed to reach the required level of significance at .05, the paragraph test did result in a significant difference. The following table with that information follows. Hence, the major hypothesis of the study was rejected on the basis of the data revealed.

Table 1

Application of Analysis of Covariance to Scores on the Diagnostic Paragraph Test for Experimental and Control Groups

Source of Variation	df	SS	MSS	F	P
Groups	1	924.79	924.79	5.02*	.03
Within	172	31,653.19	184.03		

*Significant at the .05 level

When scores of the two groups (treatment and control) were compared using the same instrument, the F value and t-tests revealed that a significant difference existed among groups. Thus, small group instruction was superior to independent study, independent study was less effective than

either night or day traditional instruction, and it was determined to be, as an instructional form, significantly inferior when compared to other options in developing the writing skills of community college students. The following table on page 7 depicts the results that rejected the sub-hypothesis that there would be no significant difference between the treatment groups and the control groups.

Table 2

Application of Analysis of Covariance to Scores on the Diagnostic Paragraph Test for Each of the Experimental and Control Groups

Source of Variation	df	SS	MSS	F	P
Modes of Instruction	3	1,731.04	577.01	3.18*	.03
Within	170	30,846.94	181.45		

*Significant at the .05 level

In an attempt to determine if there were differences between the treatment groups and the control groups as mental ability relates to developmental writing skills, no significant differences were identified statistically. However, by establishing three levels of intelligence: highest (96 and over), medium (81-95), and lowest (80 and below) and comparing methods of instruction with each level it occurred that the low intelligence group was most effected. This was disclosed when mean scores on the McGraw-Hill Basic Skills System: Writing Test

were compared by group. The data (see Figure 1, page 9) suggested that small group instruction was the least effective method for teaching low-ability community college students writing skills; however, when the total group comparisons were conducted by analysis of covariance, no statistically significant differences occurred.

Other comparisons of means indicated that no significant differences existed between groups when the subjects were classified by level of intelligence on the Otis Quick-Scoring Mental Ability Test and in writing ability on the Diagnostic Paragraph Test. As illustrated (Figure 2, page 10) the method of instruction used had a greater effect on the performance of the low-ability group than on any of the others. Most obvious were the effects of traditional instruction on the number of errors made by the day group as compared with those made by the night group. The data revealed that traditional instruction offered during the day was less effective than that offered at night. When total group comparisons were made by the analysis of covariance technique, no significant differences existed between the experimental and control groups' writing achievement when the students were compared according to mental ability.

In summary of the results the analysis designated that students in the independent study group (treatment) were less competent in overall achievement of writing skills than were those students who received small group instruction (treatment) and traditional instruction (control). However,

Treatment

Key

● = High level IQ group
▲ = Medium level IQ Group
■ = Low level IQ Group

1 = Independent Study Group (experimental)
2 = Small Group Instruction (experimental)
3 = Traditional Night Instruction (control)
4 = Traditional Day Instruction (control)

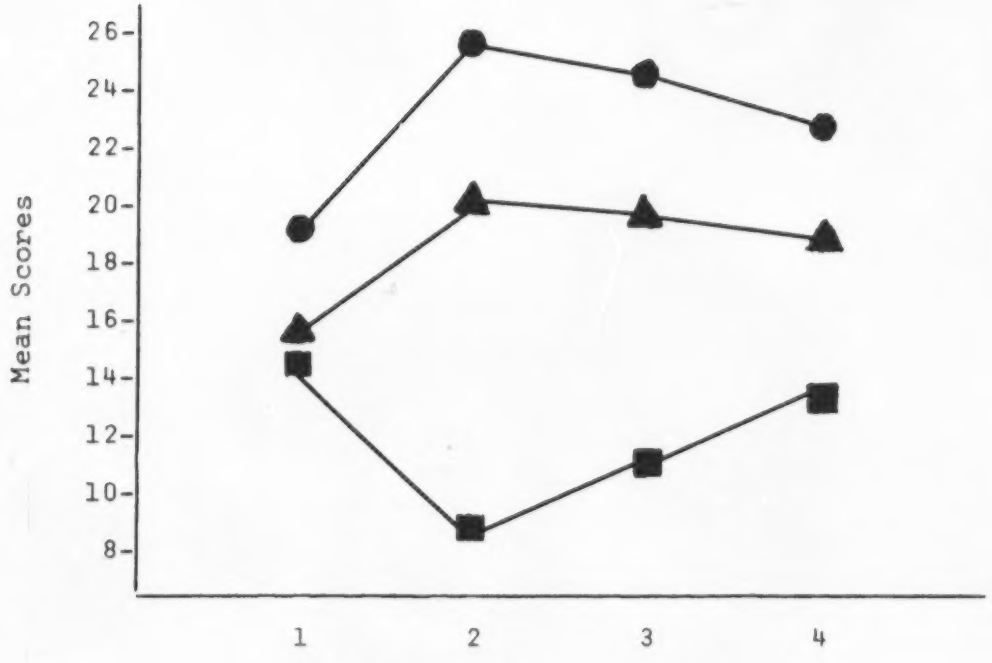

Figure 1

Comparisons of Students' Scores on the McGraw-Hill Basic Skills System: Writing Test According to Treatment and Intelligence Levels

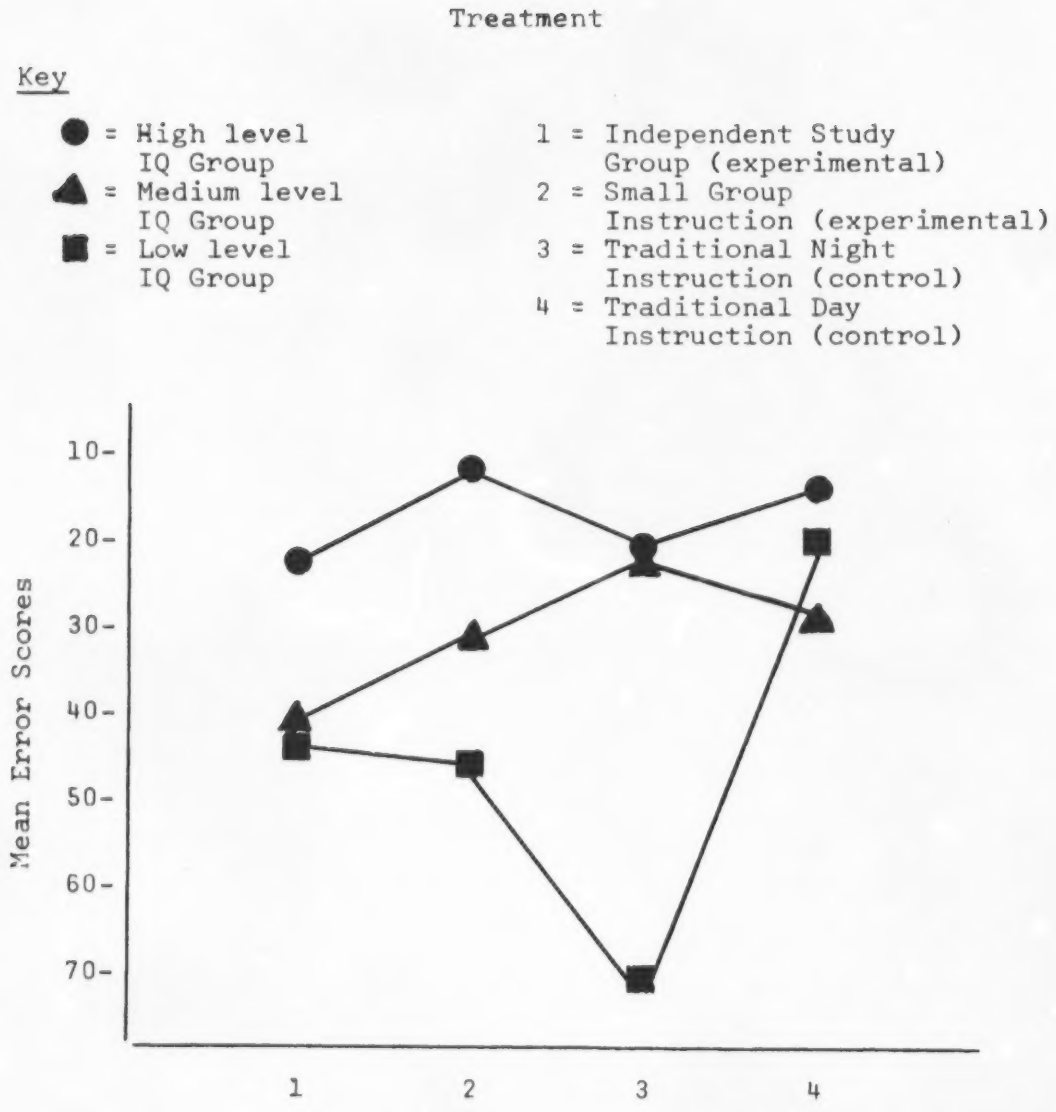

Figure 2

Comparisons of Students' Scores on the Diagnostic Paragraph Test According to Treatment and Intelligence Levels

when the combined experimental groups were compared with the combined control groups, no significant differences were established.

SUMMARY AND CONCLUSIONS

The following conclusions may be applicable to subjects similar to those who participated in the present study:

1. Groups of community college students who are enrolled in developmental writing and who are engaged in independent study learn less than students involved in small group or traditional instruction.

2. In general, small group instruction is more effective than either independent study or traditional instruction in improving developmental writing skills.

3. Traditional instruction used in night classes is more effective than traditional instruction offered during the day in improving developmental writing skills.

4. Groups of community college students with different mental abilities achieve no more in developmental writing when engaged in independent study than those students involved either in small group or traditional instruction.

At the conclusion of the course in developmental writing, the students were asked to evaluate their instruction and the course in general. Overall, the students assessed the instructional methods and the course with a degree of positivism. One of the students wrote: "I may not be able to write very well, but for the first time, I think I can!" It must be

recognized from that kind of remark that the self-confidence of the students was enhanced and their feelings about their writing abilities improved.

By similar programs in higher education, leaders may be closer to meeting the real needs and goals of students from a variety of backgrounds than ever before. It is realized that new attempts are being initiated to meet those needs; thus, higher education may be moving toward the programmatic ideals which have been long overdue.

In light of the present study, specific trends are foreseen: (1) greater attempts by colleges are being made to personalize instruction; (2) an increased emphasis is being placed on competency-based instruction; (3) a renewed awareness has occurred in improving instructional methods; (4) an effort to accommodate students with quality education is being promoted despite the students prior educational experiences; and (5) a prospect of colleges serving a broader spectrum of the community now exists.

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